

LISTING OF CLAIMS:

Claim 1 (currently amended): A non-dripping, flame retardant, fluoropolymeric composition comprising:

- (a) a fluoropolymeric base polymer; and
- (b) a nanoclay additive;

said composition having a limiting oxygen index in the range of ~~45% to 65%~~ 45.5% to 62%.

Claim 2 (original): The composition of claim 1 wherein said fluoropolymeric base polymer is selected from the group consisting of polytetrafluoroethylene (PTFE) fluorocarbons, fluorinated ethylene/propylene (FEP) fluorocarbons, perfluoroalkoxy (PFA) fluorocarbons, ethylene tetrafluoroethylene (ETFE) fluoropolymers, polyvinylidene (PVDF) fluoropolymers, ethylene chlorotrifluoroethylene (ECTFE) fluoropolymers, and fluoro-chlorinated homopolymers, copolymers and terpolymers.

Claim 3 (original): The composition of claim 1 further comprising:

- (c) an olefinic polymer.

Claim 4 (original): The composition of claim 3 wherein said olefinic polymer is selected from the group consisting of very low density polyethylene (VLDPE), low density polyethylene (LDPE), linear low density polyethylene (LLDPE), high density polyethylene (HDPE), polypropylene (PP), and ethylene propylene rubber (EPR).

Claim 5 (original): The composition of claim 5 wherein the group from which said olefinic polymer is selected further consists of ethylene-based homopolymers, copolymers and terpolymers.

Claim 6 (original): The composition of claim 3 wherein said at least one olefinic polymer is crosslinked.

Claim 7 (original): The composition of claim 6 wherein said at least one olefinic polymer is crosslinked using an organic peroxide.

Claim 8 (original): The composition of claim 1 further comprising:

- (c) one of an acetate resin and an acrylate resin.

Claim 9 (original): The composition of claim 8 wherein said one of an acetate resin and an acrylate resin is selected from the group consisting of ethyl vinyl acetate (EVA), ethylene ethyl acrylate (EEA), ethylene methyl acrylate (EMA), and ethylene butyl acrylate (EBA).

Claim 10 (original): The composition of claim 1 further comprising:

- (c) polyvinylchloride resin.

Claim 11 (original): The composition of claim 1 further comprising:

- (c) an olefinic polymer; and

(d) one of an acetate resin and an acrylate resin.

Claim 12 (original): The composition of claim 1 further comprising:

- (c) an olefinic polymer; and
- (d) polyvinylchloride resin.

Claim 13 (original): The composition of claim 1 further comprising:

- (c) an olefinic polymer;
- (d) one of an acetate resin and an acrylate resin; and
- (e) polyvinylchloride resin.

Claim 14 (original): The composition of claim 1 wherein said nanoclay additive is selected from the group consisting of synthetic silicate montmorillonites, natural layered silicate montmorillonites and a layered alumna-silicate.

Claim 15 (original): The composition of claim 14 wherein the individual platelets of said nanoclay additive are approximately 1 micron in diameter.

Claim 16 (original): The composition of claim 14 wherein said nanoclay additive is chemically modified to increase its hydrophobicity.

Claim 17 (original): The composition of claim 1 further comprising a filler selected from the group consisting of metal hydrates, oxides, carbonates,

talcs, clays, molybdates, borates, stannates, carbon blacks, silicates, and phosphates.

Claim 18 (original): The composition of claim 1 further comprising an additive comprising at least one substance selected from the group consisting of an antioxidant, a pigment, and a lubricant.

Claim 19 (currently amended): A method for preparing an exfoliated thermoplastic elastomer blend of a fluoropolymer and a nanocomposite, said blend having a limiting oxygen index in the range of ~~45% to~~ ~~65%~~ 45.5% to 62%, comprising dynamically mixing said fluoropolymer and said nanocomposite in a ratio of from about 99:1 to about 50:50 parts by weight, respectively.

Claim 20 (original): The method of claim 19 wherein at least one of an antioxidant, a lubricant and a pigment contacts said blend during mixing.

Claim 21 (previously added): The composition of claim 1 further comprising:
(c) melamine octa-molybdate.

Claim 22 (previously added): The composition of claim 21 wherein said melamine octa-molybdate is present in an amount of 1-50 percent by weight of the fluoropolymeric base polymer.

Claim 23 (currently amended): A non-dripping, flame retardant fluoropolymeric composition comprising:

- (a) PVDF resin; and
- (b) a nanoclay selected from the group consisting of synthetic silicate montmorillonites, natural layered silicate montmorillonites and a layered alumna-silicate;
said composition having a limiting oxygen index in the range of ~~45% to 65%~~ 45.5% to 62%.

Claim 24 (previously added) : The composition of claim 23 wherein said nanoclay additive is present in an amount of .1-25 percent by weight of the polyvinylidene fluoride base polymer.